TRU TeamWorks

July 6, 2006

WIPP Quick Facts

(As of 07-05-06)

4,766
Shipments received since opening

39,354
Cubic meters of waste disposed

80,270
Containers disposed in the underground

In Memoriam

Jerry Sapien died Friday, June 23, in Lubbock, TX. Jerry became part of the Washington TRU Solutions team in February, when he was hired as a waste handler.

Prior to employment at WIPP, Jerry proudly served his country as an Army chemical operations specialist, returning from assignment in Iraq in 2005.

In the few months he has worked at WIPP, he has made many friends and will be greatly missed.

Mountain lion sighted

An adult mountain lion (or cougar) has been seen on several occasions near the WIPP site. We encourage all personnel who walk outside the Property Protection Area (chainlink fence), to always walk in pairs or groups. Walking (or jogging) alone is not recommended. This particular animal apparently has developed a tolerance to people and WIPP activities.

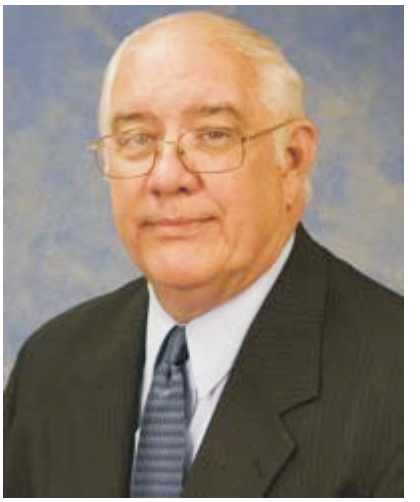
If the animal is sighted, please contact the CMR at 8457.

Stoller team awarded WIPP records contract

WTS has awarded a subcontract valued at just over $9 million to the team of S.M. Stoller Corp., Triumph Technologies, Inc. and Source One Management Inc., to establish a WIPP Records Archive in Carlsbad, N.M. The subcontract is to be performed over a 27-month period.

"This contract is the second in a series of contracts that will lead to a permanent solution for the WIPP records task. We are eager to get started with this important work."

Dick Raaz
WTS president and general manager



"This contract is the second in a series of contracts that will lead to a permanent solution for the WIPP records task. We are eager to get started with this important work," said Dick Raaz, WTS president and general manager. WTS manages and operates the Waste Isolation Pilot Plant (WIPP) near Carlsbad for the U.S. Department of Energy (DOE).

The records project is funded by the Department of Energy through monies earmarked for WIPP records management in the 2003, 2004 and 2006 Energy and Water appropriations bills. It is estimated that the facility will receive 7,500 boxes of records annually from sites that generate the defense wastes disposed at WIPP. The records will be scanned, digitized and stored to national archive standards. An additional 2,500 boxes of records are expected to be digitized each year from the WIPP project.

"We are clearly pleased with this contract award and want to thank the New Mexico congressional delegation, especially Senator Domenici, for their hard work. It's the result of many years of hard work and cooperation. This records center will provide new jobs for our community," said Carlsbad Mayor Bob Forrest.

Carlsbad and DOE leaders have long promoted the concept of a records archive to preserve WIPP records. Representative John Heaton, a long time supporter, said the records project has national significance. "This facility will consolidate all records related to the nation's defense transuranic wastes. It is the intent of Congress that these records will be permanently stored in Carlsbad and made readily accessible to citizens, researchers, stakeholders and WIPP regulators. It is our expectation that this facility will expand to accept a variety of other records from additional private and commercial facilities."

S.M. Stoller Corp. has been involved in WIPP programs since 1988. The Colorado-based company provides management and preservation services to DOE's Office of Legacy Management for records related to the cleanup and closure of sites within the nation's nuclear weapons complex.

Triumph Technologies, Inc., a minority, woman-owned corporation with headquarters in Falls Church, Va., offers 18 years of experience in program

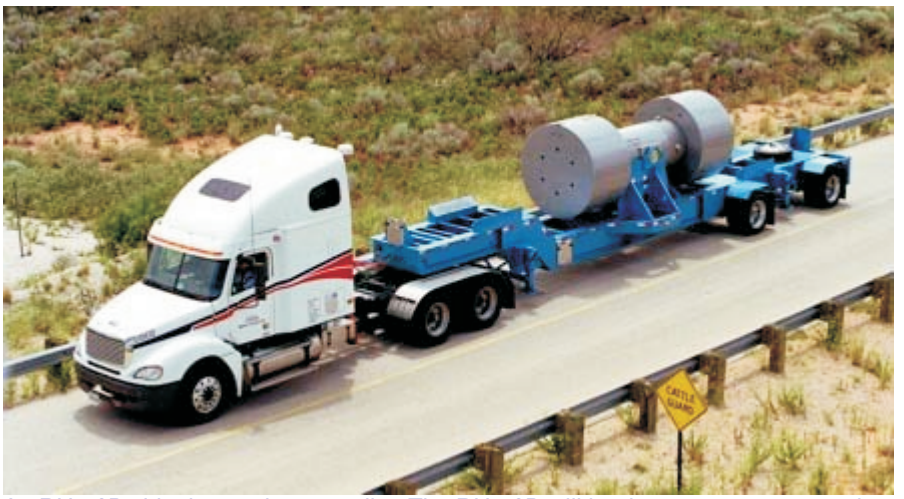
management, information technology and security operations services to government and private industry.

Source One Management Inc. brings more than 20 years experience in federal and commercial records management to the WIPP Records Archive team. The company, based in Denver, Colo., also specializes in information technology.

The contract performance period extends through 2008. The WIPP Records Archive facility will be located at 2102 A South Canal Street in Carlsbad.

Remote-Handled Waste Series: On the road to WIPP

Shipping TRU waste from sites across the nation to WIPP requires an integrated effort. WIPP shipments use specially designed shipping containers, are driven by some of the nation's safest truck drivers, are tracked by satellite and are subject to rigorous inspections en route. In seven years, WIPP has completed an impressive number of shipments (more than 4,700), logging more than 10 million miles.



An RH-72B shipping cask on a trailer. The RH-72B will be the most common cask used to ship remote-handled waste to WIPP.

A convoy of trucks carrying CNS 10-160Bs traveling from Battelle-Columbus Laboratory to the Savannah River Site last year.

A new chapter in WIPP transportation, the shipment of remote-handled (RH) TRU waste, is pending approval by the New Mexico Environment Department. However, WIPP has been preparing for the shipments for years. Certainly, RH TRU waste shipments will look very different than the contact-handled (CH) TRU waste shipments we've seen thus far, but the basics remain the same.

Shipping casks

The familiar TRUPACT-II and HalfPACT shipping containers used for transporting CH waste to WIPP will not be used for RH waste. Instead, two different shipping containers, or casks, will be used: the RH-72B and the CNS 10-160B casks. The workhorse RH-72B is leak-tight and constructed with inner and outer containment vessels. It is a large cylinder approximately 12-feet long and about 3.5 feet in diameter, capped at both ends by circular impact limiters. The impact limiters, which give it the appearance of a dumbbell, are designed to act as shock absorbers to protect the container and its contents in the event of an accident.

The RH-72B has 1 7/8 inches of lead shielding sandwiched between thick stainless steel shells to ensure that the surface dose rate outside the container meets U.S. Department of Transportation (DOT) limits for transporting radioactive materials. The surface dose rate limits for RH containers are the same as the surface dose rate limits on shipments of CH waste. The RH72-B also has an outer thermal shield to protect the container from potential fire damage.

The lead shielding makes the RH-72B extremely heavy. The empty cask weighs

Happy Birthday Wishes!

Barry Brown (WTS)
July 9

Sam Fierro (WTS)
July 9

Vivian Allen (L&M)
July 10

Tom Goff (WTS)
July 10

Raeburn Josey (WTS)
July 10

Susan Scott (WTS)
July 10

Mike Fox (L&M)
July 12

Dave Kump (WTS)
July 12

Joe Lopez (NCI)
July 15

Dawn Estes (WTS)
July 17

Is your birthday on our list? Employee birthdays are submitted once and must be re-approved for publication by you every year. Please submit birth dates to the TRU TeamWorks staff at: TRUTeamWorks@wipp.ws.

37,000 pounds, compared to a TRUPACT-II at 12,500 pounds. Since only one RH-72B will be loaded on a trailer per shipment, the tractor, trailer and shipping container will remain below DOT gross vehicle weight limits of 80,000 pounds.

The RH72-B was approved by the Nuclear Regulatory Commission in 2000 for WIPP use.

The CNS 10-160B cask can hold up to ten 55-gallon drums, however, at 58,520 pounds empty, it is significantly heavier than the RH-72B. With the weight of the tractor, trailer, and TRU waste, a 10-160B shipment exceeds the DOT weight limits and will require overweight permits.

While neither cask has been used to ship waste to WIPP, both have successfully been used to ship RH TRU waste between sites. In fall 2005, the RH-72B and CNS 10-160B were used to ship RH TRU waste from Battelle Columbus Laboratory (BCL) in Ohio to the Savannah River Site in South Carolina . The shipments were part of a campaign to clean up legacy TRU waste from BCL, which was completed in December 2005.

Routes

RH TRU waste is temporarily stored at about a dozen sites around the country, with the largest anticipated quantities at Hanford, Oak Ridge National Laboratory, Idaho National Laboratory (INL) and the Los Alamos National Laboratory (LANL). The routes are identical to those identified for the transportation of CH TRU waste.

WIPP transportation routes are designated in cooperation with affected states and tribal nations. Most are interstate highways, but other highways may be designated when practical. The first shipment of RH TRU waste will likely originate from INL or LANL.

Satellite tracking

TRANSCOM, the U.S. Department of Energy's Transportation Tracking and Communication System, will be used for RH TRU shipments, just as it is used now to track CH TRU shipments. TRANSCOM, which has an around-the-clock control center, uses satellite communications and computer networks to monitor shipments from beginning to end. Federal, state and tribal officials along the routes have secure access to the system.

Inspections

Before departing from a site for WIPP, all shipments, CH or RH, undergo a Commercial Vehicle Safety Alliance (CVSA) Level VI inspection. These inspections are the most rigorous in the shipping industry. For example, a non-functioning tail light, even during daylight hours, will prevent a shipment from proceeding until fixed.

Strict scrutiny of WIPP shipments is maintained during the entire trip. The trucks are subject to CVSA Level VI inspections at ports-of-entry, and states may pull a truck over without cause at any point on the highway for inspection. WIPP drivers must also inspect their trucks every three hours or 150 miles.

Emergency response training

Since 1988, more than 25,000 emergency response professionals have been trained along WIPP routes. The training focuses on emergency responders who may potentially respond to accidents involving WIPP waste shipments, and is provided by DOE without charge. Response to a radiological incident is the same for both RH and CH TRU shipments.

The first article in the Remote-Handled Waste Series can be read in the June 26, 2006 issue of TRU TeamWorks.

WIPP giving back to nature

Top - A drill pad site shown prior to reclamation.

Middle - A drill pad site during reclamation.

Below - A fully reclaimed drill pad site.

WIPP is giving back to nature in the form of drill pad reclamation. WIPP is working with the Bureau of Land Management (BLM), and Grando's, a small business based out of Loving, N.M., to reclaim some of the land used for groundwater monitoring that directly supports the recertification process.

Gene Valett (WRES), WIPP's land use coordinator, has worked with Harold Johnson, CBFO National Environmental Policy Act compliance manager, to come up with a plan to reclaim the drill sites. Valett said the plan for reclamation is to restore the land that has been used to support groundwater monitoring to its natural state. He said restoration is important to provide a habitat for the wildlife at the WIPP site, and especially the habitat for the Lesser Prairie Chicken (LPC), which recently had been considered for the endangered species list. The area within and around the WIPP Land Withdrawal Area provides a suitable habitat for the LPC and has supported LPC populations in the past.

"Reclamation of these sites will conform to the BLM Interim Management Plan for restoring the Lesser Prairie Chicken habitat," Valett said. "We want to reclaim the land and get it back as close as we can to its natural state."

WIPP and the BLM plan to reclaim at least 18 pads over the next few years. Four are in the process of being reclaimed since the project began in March.

Pads are normally 150 ft. x 150 ft. at the time a well is drilled; they are then reduced to 50 ft. x 50 ft. when drilling activity has ceased and only well monitoring activities are conducted. Once the well is abandoned and no longer in use, the pad is restored to its natural state. As part of the restoration process, pits are dug at the drill sites and filled with the caliche used to build the pad, then topped off with sand from the original pit excavation.

Valett said that reusing materials at the site for reclamation has its benefits. “We didn’t have to pay to export or import the materials required for reclamation and it saves money by using caliche and root media that is already at the reclamation site.”

Grando’s provides labor, operators and equipment on each of the well pads. Jackie Onsurez of Grando’s says it’s a learning experience. “They realized the impact the drill pads had on the environment. A lot of industries could learn from what we are doing.”

Valett said there are many pluses to the reclamation project, citing the reuse of material that is already there, the opportunity to work with the BLM on the project, cost and schedule and the fact that WIPP is able to mentor a small business.

Check upcoming issues of TRU TeamWorks for progress on the reclamation project.

Summer intern helps solve ventilation issue

WTS intern, Brandon Lackey, came to WIPP this summer hoping to make a difference, though he probably didn’t think he would succeed so quickly. In his brief time here, he has made an impact that could help WTS save time and money.

Last month, employees discovered that an underground airlock was not functioning properly. Both airlock bulkhead doors could be opened simultaneously, creating the potential for an airflow problem in the mine. Lackey applied his education to the task.

“Opening both doors at the same time messes up the airflow in the mine and causes parts of the mine to lose ventilation,” Lackey said. “What I did was write a new logic program for the airlock’s programmable logic controller (PLC) to prevent this from happening.”

Throughout the underground, there are numerous bulkheads built at drift cross-sections to control ventilation in the mine. The bulkheads serve to regulate and direct airflow in the mine as needed.

“The bulkheads are there to make the air go the direction we want it to so that all parts of the mine will get the right amount of air,” Lackey said. “There are louvers installed in some bulkheads that are like shutters on a window that can be opened

or closed to change the amount of air that gets through."

The ventilation system provides fresh air to underground workers and removes diesel exhaust and dust from the work environment. The mine is ventilated by large fans that draw air in through the other shafts. The Air Intake Shaft is the primary source for fresh air to the mine, though a significant amount also comes in through the Salt Handling and Waste Handling shafts.

The PLC is an upgrade from a more complex system that will make troubleshooting easier. Jerry Graham, who oversees Lackey's work at the site, said the PLC programming work Lackey did with the bulkhead doors will benefit WIPP.

"Brandon is presently working on a design that will allow the controls of the underground ventilation regulators to operate with a PLC," Graham said. "This project will save time and money since many of the components that are presently being used could be upgraded to a PLC."

Lackey plans to graduate in the fall with his bachelor's degree in electrical engineering from New Mexico State University . The WIPP internship is a second for Lackey. He interned at IBM's Austin Research Laboratory working on the PlayStation 3 microprocessor.

WIPP nurses achieve additional certification

Always ready to keep WIPP's employees healthy and safe. WIPP Health Services nurses, Anita Self, RN, and Joyce Pruitt, LPN, recently completed the Trauma Nurse Core Certification (TNCC) training.

Pruitt took the plunge and participated in the grueling TNCC class for the first time, while Self participated in the training for recertification. A standardized assessment system was learned with emphasis on rapid diagnosis and interventions. A strenuous comprehensive written exam and a full day practical exam was also part of the process.

"While unnerved at times," says Self, "Joyce did very well and is now certified as a trauma nurse provider."

Joyce Pruitt successfully completed Trauma Nurse Core Certification training.

In addition, the duo spent a day recertifying as American Heart Association Advanced Cardiac Life Support (ACLS) providers. Doing the classes back to back was very challenging, as the training is incredibly intense.

Health Services would like to thank WTS Technical Training for its generous loan of assorted equipment and a 150-pound dummy. The use of a full-size, full-weight dummy made the training more realistic and challenging. In fact, the instructor plans to teach all future classes using such a dummy.

Anita Self successfully completed Trauma Nurse Core Certification training for recertification.

Self and Pruitt are among the best trained professionals in the New Mexico Occupational Health Nurses Association. Between the two, they also hold numerous other certifications, including Certified Occupational Hearing Conservationist, Breath Alcohol Technician/Instructor, National Institute of Occupational Safety and Health-certified Pulmonary Function Technician, Department of Transportation-certified Substance Collector Technician, Critical Incident Stress Management provider, American Heart Association Healthcare Provider and American Board for Occupational Health Nurses Certified Occupational Health Nurse-Specialist.

Both nurses are required to take 30 hours of continuing education each year. Self is required to take an extra 75 hours of education every three years to maintain her board certification. All in all, WIPP's occupational nurses rank among the nation's best for training and education.

Please join Health Services in congratulating our nursing staff on this tremendous accomplishment!

Submitted by: WTS Health Services

The U.S. Department of Energy
Waste Isolation Pilot Plant

Please send comments and/or suggestions to: TRU TeamWorks